REMARKS

This Amendment is in response to the Office Action of February 20, 2003, in which claims 1-8 and 11-57 were rejected. Reconsideration and allowance of claims 1-8 and 11-57 is requested. The specification was objected to because on page 1, line 7-9 the underlines were not understood. Claims 25 and 27 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The specification has been amended to include the serial numbers and the patent numbers for the cited copending applications.

With regard to claim 25, supplying an air pressure to the mouth can cause a decrease in volume of the lungs of the patient if the air pressure supplied is less than the pressure in the lungs. As disclosed in the specification, the lungs may be deflated by decreasing the pressure in air chamber 84. (Page 10, line 4).

Claim 27 has been amended to clarify the claimed subject matter. The phrase "changes an effective atmospheric pressure" has been replaced by the phrase "provides a pressure bias in relation to atmospheric pressure." See also Page 9, line 9.

Claims 13, 30, 31, 32 and 35 have also been amended to correct minor errors or clarify the claimed subject matter.

Claims 1, 3-5, 7, 8, 11-16, 19, 20, 22, 27, 28, 29, 36-38, 40-57 were rejected under 35 U.S.C. § 102(b) as being anticipated by Alferness (4,349,015). Alferness does not teach a steady state air pressure component that is greater than atmospheric pressure. The Examiner states that Alferness shows a method comprising: supplying air pressure to a mouthpiece, the air pressure having an oscillating component (column 4, lines 34-42) and a steady state component (column 4, lines 63-67). Further the Examiner states that Alferness teaches a steady state air pressure component produced by gas containing or consisting of oxygen from another atmospheric pressure source (column 5, lines 1-4).

Claims 1, 5, 11, 14, 15, 16, 56 and 57 have been amended to clarify that the steady state air pressure component is greater than atmospheric pressure. Because Alferness only discloses a "steady state" air pressure component that is equal to atmospheric pressure and not a steady state air pressure

component that is greater than atmospheric pressure, Alferness does not anticipate any of the independent claims. Because the dependent claims include all of the limitations of the claim for which it depends, Alferness does not anticipate dependent claims 3-4, 7, 8, 12, 13, 19, 20, 22, 27, 28, 29, 36-38, 40-55.

Claims 1, 3-5, 7, 8, 11-16, 19, 20, 22, 27, 36-55 were rejected under 35 U.S.C. § 102(b) as being anticipated by Abramov et al. (5,806,512). Abramov et al. also does not teach a steady state air pressure component that is greater than atmospheric pressure. The Examiner states that Abramov shows a method comprising: supplying air pressure to a mouthpiece 38, the air pressure having a steady state air pressure component about 5 cm of H_20 at an end of the exhalation phase and an oscillating air pressure component fluctuating at about 20 cm of H_20 at the end of the inhalation phase (column 4, lines 32-35).

Claims 1, 5, 11, 14, 15, and 16 were amended to clarify that the steady state air pressure component is greater than atmospheric pressure. At column 4, line 32 Abramov et al. states, "The maximum pressure in the face mask at the end of the inhalation phase is preferably about 20 cm of H_20(water column) and 5 cm of H_20 at the end of the exhalation phase." However, Abramov does not disclose that either of these pressures is maintained throughout the entire breathing cycle. These pressures discussed in Abramov are what is preferred during a specific part of the breathing cycle. During a rest phase in Abramov, "The ventilator 42 is operated in an out-of-phase relationship with the chest cuff so that when the chest cuff is inflated the ventilator is in the exhalation mode, i.e., no breathable gas being furnished to the patient and visa versa as will be explained in more detail." (Column 4, line 14-18). Therefore, during this exhalation mode when no breathable gas is being furnished to the patient, the only steady state air pressure component would be atmospheric air pressure. Because Abramov et al. does not teach a steady state air pressure component greater than atmospheric pressure, independent claims 1, 5, 11, 14, 15, and 16 are not anticipated by Abramov et al. Because the dependent claims include all of the limitations of the claim for which it depends, Abramov et al. does not anticipate dependent claims 3-4, 7, 8, 12, 13, 19, 20, 22, 27, 36-55.

Claims 2, 6, and 17, 18, 21, 23-26, 30-35, and 39 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Alferness. In view of the amendment to claim 1, 5, and 16 and the above-discussion regarding independent claims 1, 5, and 16 upon which claims 2, 6, and 17-55 depend, the

rejection should be withdrawn. Alferness does not teach or suggest claims 2, 6, and 17, 18, 21, 23-26, 30-35, and 39.

CONCLUSION

In conclusion, Applicant believes this Amendment has placed the application in condition for allowance. Notice to that effect is respectfully requested. The Commissioner is authorized to charge any additional fees associated with this paper or credit any overpayment to Deposit Account No. 11-0982.

Respectfully submitted,

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APPENDIX:
MARKED UP VERSION OF SPECIFICATION AND CLAIM AMENDMENTS

The paragraph at page 1, line 4-9 is amended as follows:

Reference is made to the following copending applications which are filed on even date and assigned to the same assignee as this application: AIRWAY TREATMENT APPARATUS WITH AIRFLOW ENHANCEMENT, Serial No.[__________] 09/412,768, now U.S. Patent No. 6,340,025; AIRWAY TREATMENT APPARATUS WITH COUGH INDUCEMENT, Serial No.[__________] 09/412,457, now U.S. Patent No. 6,415,791; and OUTCOME MEASURING AIRWAY RESISTANCE DIAGNOSTIC SYSTEM, Serial No.[__________] 09/412,086, now U.S. Patent No. 6,210,345.

The claims are amended as follows:

1.(Amended) A chest wall oscillation method, comprising:
applying an oscillating compressive force to a chest of a patient, the oscillating compressive force having a steady state force component and an oscillating force component; and
supplying air pressure to a mouthpiece in communication with a mouth of a patient, the air pressure having an oscillating air pressure component and a steady state air pressure component greater than atmospheric pressure, the steady state air pressure component having a direction and a magnitude tending to counteract the steady state force component of the oscillating compressive force.

5.(Four times amended) A chest wall oscillation method, comprising:
applying an oscillating compressive force to a chest of a patient, the oscillating compressive force having a steady state force component and an oscillating force component; and
supplying air pressure to a mouthpiece in communication with a mouth of the patient to provide a steady state air pressure component greater than atmospheric pressure which at least partially cancels the steady state force component and provide an oscillating air pressure component.

11.(Thrice Amended) A chest wall oscillation method for removal of mucus from a lung of a patient, the method comprising:
applying an oscillating compressive force to a chest of a patient; and
supplying air pressure to a mouthpiece with a steady state air pressure component greater than atmospheric pressure in a direction and a magnitude which tends to counteract a steady state force component of the oscillating compressive force.

13.(Amended) The method of claim 11 wherein the air pressure includes an oscillating air pressure component [and a steady state air pressure component].

APPENDIX:
MARKED UP VERSION OF SPECIFICATION AND CLAIM AMENDMENTS

14. (Amended) A chest wall oscillation method for removal of mucus from a lung of a patient, the method comprising:

applying an oscillating compressive force to a chest of a patient to cause displacement of a chest cavity volume, the oscillating compressive force including a steady state force component and an oscillating force component; and

supplying air pressure to a mouth of the patient, the air pressure having an oscillating air pressure component and a steady state air pressure component <u>greater than atmospheric pressure</u>, the steady state air pressure component having a direction and a magnitude tending to make the oscillating compressive force effective throughout each entire cycle.

15. (Amended) A method for removal of mucus from a lung of a patient, the method comprising:

applying an oscillating compressive force to a chest of a patient;

supplying air pressure <u>greater than atmospheric pressure</u> to a mouthpiece positioned in a mouth of the patient; and

coordinating the applying the oscillating compressive force and the supplying air pressure to the mouthpiece to make the oscillating compressive force effective throughout each entire cycle to induce mucus movement.

16. (Amended) A chest wall oscillation method, comprising:

applying an oscillating compressive force to a chest of a patient, the oscillating compressive force having a steady state force component and an oscillating force component; and

supplying an air pressure to a mouth of the patient, the air pressure having a steady state air pressure component <u>greater than atmospheric pressure</u> and an oscillating air pressure component, the steady state air pressure component opposing the steady state force component applied to the chest.

27. (Amended) The method of claim 16 wherein supplying the air pressure <u>provides a pressure bias in relation to</u> [changes an effective] atmospheric pressure.

31. (Amended) The method of claim 28 wherein the supplying the air pressure substantially cancels [force] oscillations caused by the oscillating compressive force.

32. (Amended)The method of claim 28 wherein the oscillating air pressure component exhibits a non-sinusoidal waveform [is produced].

35.(Amended) The method of claim 28 wherein the oscillating air pressure component causes a first [flow] airway <u>flow</u> rate while the patient is inspiring to be lower than a second airway flow rate while the patient is expiring, with the first <u>airway</u> flow rate and the second <u>airway</u> flow rate using equal volumes of air.

APPENDIX:
MARKED UP VERSION OF SPECIFICATION AND CLAIM AMENDMENTS

56. (Amended) A chest wall oscillation method, comprising:
applying an oscillating compressive force to a chest of a patient, the oscillating compressive force having a steady state force component and an oscillating force component;
supplying an air pressure to a mouth of the patient, the air pressure having a steady state air pressure component <u>greater than atmospheric pressure</u> and an oscillating air pressure component,
supplying the steady state air pressure component in relation to the steady state force component applied to the chest; and
supplying the oscillating air pressure component in a synchronized relationship with the oscillating force component.

57. (Amended) A chest wall oscillation method, comprising:
applying an oscillating compressive force to a chest of a patient, the oscillating compressive force having a steady state force component and an oscillating force component;
supplying a steady state air pressure component <u>greater than atmospheric pressure</u> to a mouth of the patient in relation to the steady state force component applied to the chest; and
supplying an oscillating air pressure component to the mouth of the patient in a synchronized relationship with the oscillating force component.